

## A. AMENDMENTS TO CLAIMS

Please amend the claims as indicated hereinafter.

1. (CURRENTLY AMENDED) A method for measuring client-side performance, the method comprising:  
an application program executing on a server device processing a request from a client process executing on a client device and generating an item in response thereto that is to be sent to the client process; and  
at the server device:  
intercepting the item generated by the application program ~~prior to arrival of the item at the client process;~~  
determining a percentage of total items sent to the client process that are to be modified;  
determining, based upon the percentage of total items sent to the client process that are to be modified, whether the intercepted item is to be modified; and  
if, based upon the percentage of total items sent to the client process that are to be modified, the intercepted item is to be modified, then  
modifying the intercepted item transparently with respect to the application program to produce a modified item that includes code which, when processed by one or more processors at the client device causes:  
at the client device, measuring performance related to a service associated with the item, and  
at the client device, performing one or more acts based on a measurement resulting from said step of measuring performance, wherein the one or more acts includes sending data indicating the measurement to an entity over the network; and  
sending the modified item over the network to the client process executing on the client device.

2. (CANCELED)
3. (PREVIOUSLY PRESENTED) The method of Claim 1, wherein said steps of measuring performance and performing one or more acts based on the measurement are performed transparently with respect to a user of the client process.
4. (CANCELED)
5. (PREVIOUSLY PRESENTED) The method of Claim 1, wherein said step of sending the data to an entity further comprises storing the data in a data structure that is automatically sent to the server device associated with said service in response to a later request from the client process for said service.
6. (ORIGINAL) The method of Claim 5, wherein:  
the client process is a web browser; and  
the data structure is a cookie stored on the client device by the web browser.
7. (PREVIOUSLY PRESENTED) The method of Claim 1, wherein:  
the step of modifying the item includes adding code to the item which, when processed by the one or more processors at the client device, causes the client process to issue a request to the server device over the network; and  
said step of sending data indicating the measurement to an entity further comprises sending the request including the data indicating the measurement to the server device over the network.
8. (ORIGINAL) The method of Claim 7, wherein the request is for a particular file and in response to the request for the particular file no change is made by the client process to a page already rendered on a display of the client device.
9. (PREVIOUSLY PRESENTED) The method of Claim 1, further comprising storing the data indicating the measurement in a log file on the server device.

10. (PREVIOUSLY PRESENTED) The method of Claim 1, further comprising storing the data indicating the measurement in a database of the entity on the network.
11. (PREVIOUSLY PRESENTED) The method of Claim 1, further comprising:  
the server device receiving over the network the data indicating the measurement; and  
performing one or more acts at the server device based on the data indicating the measurement.
12. (PREVIOUSLY PRESENTED) The method of Claim 11, wherein said step of performing one or more acts at the server device based on the data indicating the measurement further comprises:  
determining whether the data indicating the measurement indicates performance has fallen below a threshold; and  
if the data indicating the measurement indicates performance has fallen below the threshold, then sending a notification message.
13. (PREVIOUSLY PRESENTED) The method of Claim 1, wherein said step of at the client device performing one or more acts based on the measurement further comprises:  
determining whether the measurement indicates performance has fallen below a threshold; and  
if the measurement indicates performance has fallen below the threshold, then sending a notification message.
14. (ORIGINAL) The method of Claim 13, said step of sending a notification message comprising sending the notification message to an administrator for a server device associated with said service.
15. (ORIGINAL) The method of Claim 13, said step of sending a notification message comprising sending the notification message to a user of the client process.

16. (ORIGINAL) The method of Claim 1, wherein the measurement is a client response time between a first time when a user of the client process selects an item on a first web page rendered on a display of the client device and a second time when a second web page is fully rendered on the display of the client device.
17. (PREVIOUSLY PRESENTED) The method of Claim 1, wherein:
  - processing of the code by the one or more processors at the client device
  - collecting ancillary information relating to one or more components of the client process that participate in obtaining the service from the application program; and
  - the at the client device performing one or more acts based on the measurement includes correlating the measurement with the ancillary information.
18. (PREVIOUSLY PRESENTED) The method of Claim 1, after said step of intercepting the item and before said step of modifying the item, further comprising the steps of:
  - determining a type associated with the item; and
  - determining whether to perform said step of modifying the item based on the type of the item.
19. (PREVIOUSLY PRESENTED) The method of Claim 1, after said step of intercepting the item and before said step of modifying the item, further comprising the steps of:
  - determining a unique reference associated with the item; and
  - determining whether to perform said step of modifying the item based on whether the unique reference matches a particular reference.
20. (CANCELED)
21. (ORIGINAL) The method of Claim 1, wherein:

the item to be sent to the client process is stored in a cache before the item is sent to the client process;  
said step of intercepting the item comprises accessing the item in the cache;  
and  
said step of sending the modified item to the client process comprises replacing the item in the cache with the modified item.

22. (PREVIOUSLY PRESENTED) The method of Claim 21, wherein the cache is on the server device.
23. (ORIGINAL) The method of Claim 21, wherein the cache is on a proxy server for the client process.
24. (ORIGINAL) The method of Claim 1, wherein:  
the item includes hypertext markup language (HTML) statements; and  
the client process is a web browser.
25. (ORIGINAL) The method of Claim 24, wherein:  
the web browser is configured to run javascript; and  
the code comprises javascript statements.
26. (ORIGINAL) The method of Claim 1, wherein the code conforms to a scripting language.
27. (ORIGINAL) The method of Claim 1, wherein the code comprises a Java applet.
28. (ORIGINAL) The method of Claim 1, wherein the code comprises an ActiveX module.
29. (ORIGINAL) The method of Claim 1, said step of modifying the item further comprising appending the code to the end of the item.
30. (ORIGINAL) The method of Claim 1, wherein:  
the item includes markup language statements; and

said step of modifying the item further comprises inserting the code at a particular statement of the markup language statements.

31. (ORIGINAL) The method of Claim 1, wherein:  
the code includes at least one of first code added to a first item and second code added to a second item; and  
said measuring performance comprises starting a time measurement based on the first code and ending a time measurement based on the second code.
32. (ORIGINAL) The method of Claim 31, wherein:  
the first code is executed in response to a user of the client process clicking on a control included in the first item; and  
the second code is executed in response to fully loading the second item.
33. (ORIGINAL) The method of Claim 1, wherein the code includes first code executed upon arrival of the first code at the client process and second code executed in response to a data structure generated by the client process after arrival of the first code.
34. (ORIGINAL) The method of Claim 33, wherein the data structure describes an event at the client device.
35. (ORIGINAL) The method of Claim 34, wherein the event is a message received from an operating system executing on the client device.
36. (ORIGINAL) The method of Claim 34, wherein the event is a manipulation of a control of the client device by a user.
37. (PREVIOUSLY PRESENTED) The method of Claim 33, wherein processing of the second code causes the measuring performance.
38. (PREVIOUSLY PRESENTED) The method of Claim 33, wherein processing of the second code causes recording a current time.

39. (PREVIOUSLY PRESENTED) The method of Claim 33, wherein:  
the item to be sent to the client process includes third code to be executed in  
response to the data structure generated by the client process; and  
processing the first code causes replacing the third code with the second  
code.
40. (ORIGINAL) The method of Claim 1, wherein the code includes first code  
executed in response to a data structure describing a first event generated by  
the client process and second code executed in response to a data structure  
describing a second event generated by the client process.
41. (PREVIOUSLY PRESENTED) The method of Claim 40, wherein:  
the item to be sent to the client process includes third code to be executed in  
response to the data structure describing the second event by the  
client process; and  
processing of the first code causes replacing the third code with the second  
code.
42. (CURRENTLY AMENDED) A computer-readable storage medium carrying instructions  
for measuring client-side performance, wherein execution of the instructions by one or  
more processors causes:  
an application program executing on a server device processing a request from a client  
process executing on a client device and generating an item in response thereto  
that is to be sent to the client process; and  
at the server device:  
intercepting the item generated by the application program ~~prior to arrival of the~~  
~~item at the client process;~~  
determining a percentage of total items sent to the client process that are to be  
modified;  
determining, based upon the percentage of total items sent to the client process  
that are to be modified, whether the intercepted item is to be modified; and

if, based upon the percentage of total items sent to the client process that are to be modified, the intercepted item is to be modified, then  
modifying the intercepted item transparently with respect to the  
application program to produce a modified item that includes code  
which, when processed by one or more processors at the client  
device causes:  
at the client device, measuring performance related to a service  
associated with the item, and  
at the client device, performing one or more acts based on a  
measurement resulting from said step of measuring  
performance, wherein the one or more acts includes  
sending data indicating the measurement to an entity over  
the network; and  
sending the modified item over the network to the client process executing on the  
client device.

43. (CANCELED)

44. (PREVIOUSLY PRESENTED) The computer-readable storage medium of Claim 42, wherein said steps of measuring performance and performing one or more acts based on the measurement are performed transparently with respect to a user of the client process.

45. (CANCELED)

46. (PREVIOUSLY PRESENTED) The computer-readable storage medium of Claim 42, wherein said step of sending the data to an entity further comprises storing the data in a data structure that is automatically sent to a the server device associated with said service in response to a later request from the client process for said service.

47. (PREVIOUSLY PRESENTED) The computer-readable storage medium of Claim 46, wherein:



the client process is a web browser; and  
the data structure is a cookie stored on the client device by the web browser.

48. (PREVIOUSLY PRESENTED) The computer-readable storage medium of Claim 42, wherein:  
the step of modifying the item includes adding code to the item which, when processed by the one or more processors at the client device, causes the client process to issue a request to the server device over the network; and  
said step of sending data indicating the measurement to an entity further comprises sending the request including the data indicating the measurement to the server device over the network.
49. (PREVIOUSLY PRESENTED) The computer-readable storage medium of Claim 48, wherein the request is for a particular file and in response to the request for the particular file no change is made by the client process to a page already rendered on a display of the client device.
50. (PREVIOUSLY PRESENTED) The computer-readable storage medium of Claim 42, wherein execution of the one or more sequences of instructions by the one or more processors further causes the one or more processors to perform the step of storing the data indicating the measurement in a log file on a server device.
51. (PREVIOUSLY PRESENTED) The computer-readable storage medium of Claim 42, wherein execution of the one or more sequences of instructions by the one or more processors further causes the one or more processors to perform the step of storing the data indicating the measurement in a database of the entity on the network.
52. (PREVIOUSLY PRESENTED) The computer-readable storage medium of Claim 42, wherein execution of the one or more sequences of instructions by the one or more processors further causes:  
the server device receiving over the network the data indicating the measurement; and

performing one or more acts at the server device based on the data indicating the measurement.

53. (PREVIOUSLY PRESENTED) The computer-readable storage medium of Claim 52, wherein said step of performing one or more acts at the server device based on the data indicating the measurement further comprises: determining whether the data indicating the measurement indicates performance has fallen below a threshold; and if the data indicating the measurement indicates performance has fallen below the threshold, then sending a notification message.
54. (PREVIOUSLY PRESENTED) The computer-readable storage medium of Claim 42, wherein said step of performing one or more acts based on the measurement further comprises: determining whether the measurement indicates performance has fallen below a threshold; and if the measurement indicates performance has fallen below the threshold, then sending a notification message.
55. (PREVIOUSLY PRESENTED) The computer-readable storage medium of Claim 54, said step of sending a notification message comprising sending the notification message to an administrator for a server device associated with said service.
56. (PREVIOUSLY PRESENTED) The computer-readable storage medium of Claim 54, said step of sending a notification message comprising sending the notification message to a user of the client process.
57. (PREVIOUSLY PRESENTED) The computer-readable storage medium of Claim 42, wherein the measurement is a client response time between a first time when a user of the client process selects an item on a first web page rendered on a display of the client device and a second time when a second web page is fully rendered on the display of the client device.

58. (PREVIOUSLY PRESENTED) The computer-readable storage medium of Claim 42, wherein:  
processing of the code by the one or more processors at the client device causes collecting ancillary information relating to one or more components of the client process that participate in obtaining the service from the application program; and  
the at the client device performing one or more acts based on the measurement includes correlating the measurement with the ancillary information.
59. (PREVIOUSLY PRESENTED) The computer-readable storage medium of Claim 42, wherein execution of the one or more sequences of instructions by the one or more processors further causes the one or more processors, after said step of intercepting the item and before said step of modifying the item, to perform the steps of:  
determining a type associated with the item; and  
determining whether to perform said step of modifying the item based on the type of the item.
60. (PREVIOUSLY PRESENTED) The computer-readable storage medium of Claim 42, wherein execution of the one or more sequences of instructions by the one or more processors further causes the one or more processors, after said step of intercepting the item and before said step of modifying the item, to perform the steps of:  
determining a unique reference associated with the item; and  
determining whether to perform said step of modifying the item based on whether the unique reference matches a particular reference.
61. (CANCELED)
62. (PREVIOUSLY PRESENTED) The computer-readable storage medium of Claim 42, wherein:

the item to be sent to the client process is stored in a cache before the item is sent to the client process;  
said step of intercepting the item comprises accessing the item in the cache;  
and  
said step of sending the modified item to the client process comprises replacing the item in the cache with the modified item.

63. (PREVIOUSLY PRESENTED) The computer-readable storage medium of Claim 62, wherein the cache is on the server device.
64. (PREVIOUSLY PRESENTED) The computer-readable storage medium of Claim 62, wherein the cache is on a proxy server for the client process.
65. (PREVIOUSLY PRESENTED) The computer-readable storage medium of Claim 42, wherein:  
the item includes hypertext markup language (HTML) statements; and  
the client process is a web browser.
66. (PREVIOUSLY PRESENTED) The computer-readable storage medium of Claim 65, wherein:  
the web browser is configured to run javascript; and  
the code comprises javascript statements.
67. (PREVIOUSLY PRESENTED) The computer-readable storage medium of Claim 42, wherein the code conforms to a scripting language.
68. (PREVIOUSLY PRESENTED) The computer-readable storage medium of Claim 42, wherein the code comprises a Java applet.
69. (PREVIOUSLY PRESENTED) The computer-readable storage medium of Claim 42, wherein the code comprises an ActiveX module.
70. (PREVIOUSLY PRESENTED) The computer-readable storage medium of Claim 42, said step of modifying the item further comprising appending the code to the end of the item.

71. (PREVIOUSLY PRESENTED) The computer-readable storage medium of Claim 42, wherein:  
the item includes markup language statements; and  
said step of modifying the item further comprises inserting the code at a particular statement of the markup language statements.
72. (PREVIOUSLY PRESENTED) The computer-readable storage medium of Claim 42, wherein:  
the code includes at least one of first code added to a first item and second code added to a second item; and  
said measuring performance comprises starting a time measurement based on the first code and ending a time measurement based on the second code.
73. (PREVIOUSLY PRESENTED) The computer-readable storage medium of Claim 72, wherein:  
the first code is executed in response to a user of the client process clicking on a control included in the first item; and  
the second code is executed in response to fully loading the second item.
74. (PREVIOUSLY PRESENTED) The computer-readable storage medium of Claim 42, wherein the code includes first code executed upon arrival of the first code at the client process and second code executed in response to a data structure generated by the client process after arrival of the first code.
75. (PREVIOUSLY PRESENTED) The computer-readable storage medium of Claim 74, wherein the data structure describes an event at the client device.
76. (PREVIOUSLY PRESENTED) The computer-readable storage medium of Claim 75, wherein the event is a message received from an operating system executing on the client device.

77. (PREVIOUSLY PRESENTED) The computer-readable storage medium of Claim 75, wherein the event is a manipulation of a control of the client device by a user.
78. (PREVIOUSLY PRESENTED) The computer-readable storage medium of Claim 74, wherein processing of the second code causes the measuring performance.
79. (PREVIOUSLY PRESENTED) The computer-readable storage medium of Claim 74, wherein processing of the second code causes recording a current time.
80. (PREVIOUSLY PRESENTED) The computer-readable storage medium of Claim 74, wherein:  
the item to be sent to the client process includes third code to be executed in response to the data structure generated by the client process; and processing the first code causes replacing the third code with the second code.
81. (PREVIOUSLY PRESENTED) The computer-readable storage medium of Claim 42, wherein the code includes first code executed in response to a data structure describing a first event generated by the client process and second code executed in response to a data structure describing a second event generated by the client process.
82. (PREVIOUSLY PRESENTED) The computer-readable storage medium of Claim 81, wherein:  
the item to be sent to the client process includes third code to be executed in response to the data structure describing the second event by the client process; and processing of the first code causes replacing the third code with the second code.

83. (CURRENTLY AMENDED) A method for responding to client-side performance on a network connecting a client device executing a client process to a server device configured to execute an application program to provide a service, the method comprising the steps of:
- the application program processing a request from a client process and generating an item in response thereto that is to be sent to the client process; and
- at the server device:
- intercepting the item produced by the application program ~~prior to arrival of the item at the client process;~~
  - determining a percentage of total items sent to the client process that are to be modified;
  - determining, based upon the percentage of total items sent to the client process that are to be modified, whether the intercepted item is to be modified; and
  - if, based upon the percentage of total items sent to the client process that are to be modified, the intercepted item is to be modified, then
    - modifying the intercepted item transparently with respect to the application program to produce a modified item including code which, when processed by one or more processors on the client device causes:
      - at the client device, measuring performance related to the service provided by the application program, and
      - based on a measurement resulting from said step of measuring performance, sending data indicating the measurement from the client device over the network to the server device;
  - sending the modified item over the network to the client process executing on the client device;
  - receiving the data over the network indicating the measurement;
  - storing the data indicating the measurement in a database; and
  - based on the data indicating the measurement,

determining whether the data indicates performance has  
fallen below a threshold, and  
if the data indicates performance has fallen below the threshold, then  
sending a notification message.

84. (CANCELED)

85. (CURRENTLY AMENDED) A computer-readable storage medium for responding to client-side performance on a network connecting a client device executing a client process to a server device configured to execute an application program to provide a service, the computer-readable storage medium carrying instructions which, when processed by one or more processors, cause:  
the application program processing a request from a client process and generating an item  
in response thereto that is to be sent to the client process; and  
at the server device:  
intercepting the item produced by the application program ~~prior to arrival of the~~  
~~item at the client process;~~  
determining a percentage of total items sent to the client process that are to be  
modified;  
determining, based upon the percentage of total items sent to the client process  
that are to be modified, whether the intercepted item is to be modified; and  
if, based upon the percentage of total items sent to the client process that are to be  
modified, the intercepted item is to be modified, then  
modifying the intercepted item transparently with respect to the  
application program to produce a modified item including code  
which, when processed by one or more processors on the client  
device causes:  
at the client device, measuring performance related to the service  
provided by the application program, and  
based on a measurement resulting from said step of measuring  
performance, sending data indicating the measurement  
from the client device over the network to the server  
device;



sending the modified item over the network to the client process executing on the client device;  
receiving the data over the network indicating the measurement;  
storing the data indicating the measurement in a database; and  
based on the data indicating the measurement,  
determining whether the data indicates performance has fallen below a threshold, and  
if the data indicates performance has fallen below the threshold, then sending a notification message.